contacting the sample with a human endothelin receptor having an affinity for endothelins 1 and 2, comprising an amino acid sequence from Asp at 1 to Asn at 407 of SEQ ID NO: 1; and

detecting binding of the sample to the endothelin receptor.

In one embodiment, the endothelin receptor is detectably labeled.

In another embodiment, the endothelin receptor is present on a cell membrane.

C1 CONT

In another embodiment, the step of detecting comprises measuring a change in a current across the cell membrane.

In another embodiment, the cell contains a DNA molecule comprising a nucleic acid sequence from G at 545 to C at 1765 shown in SEQ ID NO: 1.

In the Claims:

Please cancel claims 1-22.

Please add the following new claims 23-39:

23. (New) An isolated human endothelin receptor having an affinity for endothelins 1 and 2, comprising an amino acid sequence from Asp at 1 to Asn at 407 of SEQ ID NO: 1.

C2

24. (New) An isolated human endothelin receptor precursor comprising an amino acid sequence from Met at -20 to Asn at 407 of SEQ ID NO: 1.

25. (New) A method for identifying an agonist or an antagonist of a human endothelin receptor, comprising the steps of:

contacting a sample comprising an endothelin receptor according to claim 23 with a candidate compound; and

detecting binding of the candidate compound to the endothelin receptor.

26. (New) The method of claim 25, wherein the sample comprises a cell expressing the receptor of claim 23.

27. (New) The method of claim 26, wherein the cell contains a DNA molecule comprising a nucleic acid sequence from G at 545 to C at 1765 shown in SEQ ID NO: 1.

28. (New) A method of manufacturing a pharmaceutical composition, comprising the steps of:

screening a library of candidate compounds by:

contacting a sample comprising an endothelin receptor according to claim 23 with each candidate compound in the library,

detecting binding of the candidate compound to the endothelin receptor, and

identifying compounds which bind to the endothelin receptor;

selecting an target compound identified from the library; and

formulating said target compound with a pharmaceutically acceptable carrier.

C2 Cont

29. (New) The method of claim 28, wherein the sample comprises a cell expressing the receptor of claim 23.

30. (New) The method of claim 29, wherein the cell contains a DNA molecule comprising a nucleic acid sequence from G at 545 to C at 1765 shown in SEQ ID NO: 1.

31. (New) A pharmaceutical composition produced by the method of claim 28.

32. (New) A method of modulating an endothelin receptor, comprising the steps of:

screening a library of candidate compounds by:

contacting a sample comprising an endothelin receptor according to claim 23 with each candidate compound in the library,

detecting binding of the candidate compound to the endothelin receptor, and

identifying compounds which bind to the endothelin receptor;

selecting a target compound identified from the library; and

contacting the endothelin receptor with the target compound.

33. (New) The method of claim 32, wherein the sample comprises a cell expressing the receptor of claim 23.

34. (New) The method of claim 33, wherein the cell contains a DNA molecule comprising a nucleic acid sequence from G at 545 to C at 1765 shown in SEQ ID NO: 1.

35. (New) A method of treating a condition characterized by abnormal activity of endothelin receptors in a subject, comprising the steps of:

screening a library of candidate compounds by:

contacting a sample comprising an endothelin receptor according to claim 23 with each candidate compound in the library,

detecting binding of the candidate compound to the endothelin receptor, and

identifying compounds which bind to the endothelin receptor;

selecting a target compound identified from the library; and

administering the target compound to the subject.

36. (New) The method of claim 35, wherein the sample comprises a cell expressing the receptor of claim 23.

37. (New) The method of claim 36, wherein the cell contains a DNA molecule comprising a nucleic acid sequence from G at 545 to C at 1765 shown in SEQ ID NO: 1.

38. (New) A method of determining ET-1 or ET-2 in a sample, comprising the steps of:

contacting the sample with an endothelin receptor according to claim 23, wherein the endothelin receptor is present on a cell membrane; and

detecting binding of the sample to the endothelin receptor.

39. (New) The method of claim 38, wherein the cell contains a DNA molecule comprising a nucleic acid sequence from G at 545 to C at 1765 shown in SEQ ID NO: 1.